

Applicants : Blaise L. Corbett *et al.*
Serial No. : 10/666,823
Filed : September 17, 2003
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Attorney Docket No.: Navy Case 84382

Amendments to the Drawings:

The attached sheets of drawings include legends for all number blocks. These sheets, which include Figs 1-5D, replace the original sheets including Figs. 1-5D.

Attachment: Replacement Sheets: Figs 1-5D

REMARKS

By this Amendment, the drawings are replaced pursuant to the attached drawing sheets, claims 1, 2, 8, 10, 11, 22 and 25 are amended, including rewriting claims 2 and 11 into independent form, and claims 28-32 are added. Claims 1, 8 and 10 are amended to recite features supported in the specification at, for example, paragraphs [0030] – [0034]. Accordingly, claims 1-32 are pending in this application. No new matter is added by any of these amendments. Reconsideration based on the following remarks is respectfully requested.

I. Personal Interview

Applicants appreciate the courtesies extended to Applicants' representative, Mr. Bodendorf, by Examiner Nguyen during the September 21, 2005 personal interview. In accordance with MPEP §713.04, the points discussed during the interview are incorporated in the remarks below and constitute Applicants' record of the interview.

II. Allowable Subject Matter

Applicants gratefully acknowledge that the Office Action indicates that claims 11-21 are allowed, and that claims 2-7, 9, 23, 24, 26 and 27 contain allowable subject matter. As such, Applicants amend claims 2 and 11 into independent form to recite the features of claims 1 and 10 as previously filed. However, Applicants assert that all of claims 1, 8, 10, 22 and 25 are also allowable for the reasons discussed below.

III. Objection to the Drawings under 37 CFR §1.84

The Office Action objects to the drawings based on informalities regarding descriptive legends under 37 CFR §1.84(o). Figures 1-5D are replaced pursuant to the attached drawing sheets in accordance with 37 CFR §1.121(d). Withdrawal of the objection to the drawings is respectfully requested.

IV. Indefiniteness Rejection under 35 U.S.C. §112, ¶2

The Office Action rejects claims 8, 9 and 22-24 under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 8 and 22 have been amended to obviate this rejection in view of the

Examiner's helpful comments. In particular, the Office Action requests clarification of claim 8 for the use of the phrase "a binary word included in the CW unmodulated signals." The claim has been amended to recite --determining if a binary word indicated by the received plurality of CW unmodulated signals taken together as a group of signals a tag identifier-- to clarify the binary word is --indicated by-- rather than "included in" the signals. One example of such a group of signals is given in Applicants' specification beginning at paragraph [0033].

With respect to claim 22, the Office Action requests clarification of the where the specification discloses "a first circuit to provide an indication that the plurality of CW frequencies together correspond to the binary identification." One example of such a circuit is shown in Fig. 1 as element 112. The inputs generated from the rectifiers 110 are supplied to the logic circuit 112. The output from the logic circuit 112 (*e.g.*, an indication as recited in the claim) activates switch 114 if the plurality of the CW unmodulated frequencies correspond to the binary identification of the device 100. A corresponding description may be found, for example, at paragraphs [0019] and [0020] of the specification. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

V. Anticipatory Rejection under 35 U.S.C. §102

The Office Action rejects claims 1, 8, 10, 22 and 25 as being allegedly anticipated under 35 U.S.C. §102(a) over U.S. Patent Publication 2004/0132406 to Scott *et al.* (hereinafter "Scott"). This rejection is respectfully traversed.

Applicants respectfully assert that the basis of rejection under §102(a) is improper, because Scott qualifies as a reference only under §102(e). Specifically, Applicants' filing date antedates the July 8, 2004 publication date of Scott for both the U.S. publication as well as the July 29, 2004 date for International publication WO2004/063982. See MPEP §706.02(a)(II)(C).

Moreover, Scott was filed January 3, 2003, which is less than one year prior to Applicants' filing date of September 17, 2003. Also, Applicants' filing date antedates the December 24, 2003 filing date for the International application under PCT/US2003/041246. See MPEP §706.02(c). Thus, a subsequent Office Action that applies Scott as anticipating any of the rejected claims should also be non-final.

Applicants' claims are directed generally, for example, to an RFID tags that provides a novel binary identification system to prevent data collision between tags in close proximity. An RFID interrogator transmits multiple, unmodulated continuous wave (CW) signals at different frequencies over an area to elicit a response from a desired RFID.

Applicants' claim 1 recites, *inter alia*, "A far field radio frequency identification (RFID) tag having an associated tag identification (ID) responsive to a group of a plurality of continuous wave (CW), unmodulated signals selected from frequencies comprising a predetermined frequency band that correspond to the tag ID of the RFID tag." Applicants respectfully submit that Scott does not describe or suggest at least these features of Applicants' claims.

As explained during the personal interview, and agreed to by the Examiner (as indicated on the interview summary), Scott does not describe these features of Applicants' claim 1. Instead, Scott describes a wireless tag communications system. A first communications device 12 communicates with a second wireless communications device 14 using RF signals 18 and 20.

However, Scott's wireless communications devices communicate using modulated signals. See, *e.g.*, paragraphs [0021] and [0033] of Scott. As a result, Scott does not describe or suggest Applicants' claimed features of using a plurality of CW unmodulated signals for communication. These arguments also apply to similarly recited features in claims 8, 10, 22 and 25 with use of a plurality of CW unmodulated signals for communications.

For at least these reasons, Applicants respectfully assert that the independent claims are patentable over the applied reference. Consequently, all the claims are in condition for allowance. Thus, Applicants respectfully request that the rejection under 35 U.S.C. §102 be withdrawn.

VI. Auxiliary References

During the interview Examiner Nguyen provided several additional documents for Applicants' consideration. No rejection of record currently stands under these documents. However, in order to expedite prosecution, Applicants briefly address at least some of the deficiencies of these documents with regard to Applicants' independent claims.

U.S. Patent 5,621,412 to Sharpe *et al.* (hereinafter "Sharp") describes in its background the use of an interrogator that transmits an unmodulated, continuous wave RF signal as an

interrogation signal to a transponder. The transponder modulates and reflects the transmitted signal back to the interrogator to identify the transponder. However, Sharpe does not describe the use of a plurality of unmodulated continuous wave (CW) RF signals.

Also, Sharpe does not describe that a plurality of unmodulated CW RF signals together correspond to tag ID. The system described in Sharpe does not address the transponders but rather broadcasts the same signal to all transponders. The Sharpe transponder modulates the received signal to identify which transponder is responding.

U.S. Patent Publication 2003/0003965 to Gough only transmits a single control signal. The control signal may be continuous tone, unmodulated signal or a modulated signal. However, as in Sharpe, Gough does not disclose the use of a plurality of unmodulated, continuous wave RF signals. Further, Gough does not describe that a plurality of unmodulated continuous RF signals together correspond to an ID tag.

Finally, U.S. Patent 6,204,735 to Cairns teaches that continuous wave (CW) unmodulated signals are used by amateur radio operators. However, Cairns fails to disclose an RFID tagging and tracking system using a plurality of unmodulated, CW RF signals. Moreover, Cairns does not describe that a plurality of unmodulated CW RF signals together correspond to tag ID.

VII. Additional Claims

New claims 28-32 have been added to further identify another aspect of Applicants' claimed invention by indicating each received frequency of the plurality CW radio frequency signals corresponds to a bit of the RFID tag ID. It is respectfully submitted that no documents of record teach or suggest this feature of Applicants' claims. These added dependent claims are likewise patentable over the applied reference for at least the reasons discussed, as well as for the additional features they recite.

VIII. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

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Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,



Gerhard W. Thielman
Registration No. 43,186

Attachments:

Fee Transmittal
Replacement Drawing Sheets (Figs. 1-5D)

Date: October 17, 2005

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